V. REMARKS

Claims 9-16 are rejected under 35 U.S.C. 112, first and second paragraphs. Claims 9-16 are canceled and therefore the rejection as applied thereto is now moot. Withdrawal of the rejection is respectfully requested.

Claims 1, 3-5, 7 and 8 are rejected under 35 U.S.C. 103(a) as unpatentable over Irie (U.S. Patent No. 4,468,267) in view of Aihara et al. (Japan 59-93345), Brown et al. (U.S. Patent No. 5,554,242), Laurent (U.S. Patent No. 4,963,207), Okada et al. (EP 958,913) and, optionally, Caretta (EP 875,346) and further in view of Nakahama (U.S. Patent No. 4,369,086) and Brey et al. (U.S. Patent No. 3,849,231) and/or Mukae et al. (U.S. Patent No. 4,553,894) . The rejection is respectfully traversed.

Irie teaches an apparatus and method for manufacturing a radial tire. A carcass ply is formed into a cylindrical shape having an external diameter almost equal to an internal diameter of a pair of beaded cores. The cylindrical carcass is subsequently transformed to assume a circumferentially wave-shaped corrugated carcass ply over an entire length thereof in an axial direction while containing an outer diameter of the carcass ply. The pair of beaded cores are arranged in selected positions on the wave-shaped corrugated carcass ply which has been contracted in diameter. The carcass ply is then normalized into its cylindrical shape so as to form a structure having a pair of bead cores in contact with the external surface of the carcass ply. The carcass ply is expanded in diameter in an area thereof between the pair of bead cores of the structure. End portions of the carcass ply disposed axially outside the bead cores are bent so as to enclose the bead cores therein within portions of the carcass ply. A cylindrical carcass layer is then assembled by incorporating sidewall members with the structure. The cylindrical carcass layer is transformed to a torroidal shape thereby forming a green tire.

Aihara teaches a method and apparatus for supplying tire component material.

Brown teaches a method for making a multi-component tire. A band that constitutes a tire carcass is formed by adding gum strips to an inner liner which is covered with a ply to form the band which is then transferred to a first tire building

position for the addition of a sidewall, shoulder wedge and beads. From this position, these components are transferred to a second tire building position for final shaping of an uncured tire and the addition of breakers and tread rubber. The sidewall and shoulder wedge are formed by applying a plurality of turns of elastomer strip to obtain their shape on the carcass at the first tire building position.

Brown's system substantially reduces the cost of building a tire by bringing many machine operations for building the tire together in an efficient operation and layout which reduces the space requirements with emphasis on making the tire components as they are needed, and to be applied, to overcome the aging problem while facilitating quick changeover for size and type of tire.

Laurent teaches a method and apparatus of manufacturing a tire by laying rubber products onto a firm support. The Examiner points out in column 2, lines 15-24, that the object of this invention is to provide a method and apparatus of manufacturing tires which does away with the necessity of preparing numerous semi-finished products, as is required in conventional methods of manufacture.

Okada teaches an apparatus and method for aligning and splicing strip members for the manufacturer of pneumatic radial tires.

Caretta teaches a method and system for producing a plurality of different tires. Specifically, the method is directed to production on the same line of production of a plurality of tires having various features and distributed in at least two separate series. Each series has identical tires with one series differing from the other series by at least one different structural or dimensional feature of the series of tires. The Examiner cites this reference to show that one of ordinary skill in the art understand that adapting a given tire building line to build different tire sizes is known and desirable in the art.

Nakahama discloses a bead supply apparatus. Brey teaches a bead mechanism. Mukae teaches an apparatus for transferring annular articles such as pneumatic tires from one station to another station.

According to the present invention, it is possible to instantaneously alter the setting of the tire forming system including inner liner supply means, carcass supply means, band rubber parts supply means, belt/tread member supply means and bead

supply means, to cope with an optional particular specification of a tire to be formed. Thus, if it is made to control all the member means of the system by a computer for example, then it even is possible to alter tire specifications, each for a small lot production.

With the tire production equipment in the prior art, while it is possible to produce tires of a plurality of different specifications on a same production line, they are on condition that tires of a same specification are produced continuously in mass, in contrast to the claimed invention that is on condition that tires of a variety of different specifications are produced each in a small quantity. In other words, in the prior art, there does not exist such a technical concept according to which, with use of a large scale tire production equipment, tires of a variety of specifications are produced, each in a limited quantity.

What is constructed by the United States Patent and Trademark Office is merely a fragmentary combination or aggregation of prior art references which are on the premise of a mass production, and the United States Patent and Trademark Office fails to cite a reference showing such a tire production system enabling a small quantity production respectively of a variety of tires different in the specification.

It is respectfully submitted that none of the applied art, alone or in combination, teaches or suggests the advantages and benefits of the claimed invention mentioned above. Advantages and benefits of the invention must be considered by the Examiner under 35 U.S.C. 103 because such advantages and benefits are considered part of the invention as a whole. As a result, it is respectfully submitted that claims 1, 3-5, 7 and 8 are allowable over the applied art.

Withdrawal of the rejection is respectfully requested.

Claims 9-11 are rejected under 35 U.S.C. 103(a) as unpatentable over Miyamoto in view of Japan 345 and Brown and/or Laurent and optionally Nakahama and Brey and/or Mukae . Claims 9-11 are canceled and therefore the rejection as applied thereto is now moot. Withdrawal of the rejection is respectfully requested.

Claims 12-14 are rejected under 35 U.S.C. 103(a) as unpatentable over Miyamoto in view of Japan 345 and Brown and/or Laurent and optionally Nakahama and Brey and/or Mukae. Claims 12-14 are canceled and therefore the rejection as applied thereto is now moot. Withdrawal of the rejection is respectfully requested.

Claim 15 is rejected under 35 U.S.C. 103(a) as unpatentable over Miyamoto in view of Japan 345 and Brown and/or Laurent and optionally Nakahama, Brey and/or Mukae as applied to claims 9-11 and further in view of Wolfe (U.S. Patent No. 4,351,458) and Nelson et al. (U.S. Patent No. 2,918,177). Claim 15 is canceled and therefore the rejection as applied thereto is now moot. Withdrawal of the rejection is respectfully requested.

Claim 16 is rejected under 35 U.S.C. 103(a) as unpatentable over Miyamoto in view of Japan 345 and Brown and/or Laurent and optionally Nakahama and Brey and/or Mukae as applied to claims 9-11 and further in view of Wolfe and Nelson as applied to claims 9-11 and 15 and further in view of EP 958, 913 to Okada et al.. Claims 9-11, 15 and 16 are canceled and therefore the rejection as applied thereto is now moot. Withdrawal of the rejection is respectfully requested.

In view of the foregoing, reconsideration of the application and allowance of the pending claims are respectfully requested. Should the Examiner believe anything further is desirable in order to place the application in even better condition for allowance, the Examiner is invited to contact Applicants' representative at the telephone number listed below.

Should additional fees be necessary in connection with the filing of this paper or if a Petition for Extension of Time is required for timely acceptance of the same, the Commissioner is hereby authorized to charge Deposit Account No. 18-0013 for any such fees and Applicant(s) hereby petition for such extension of time.

Respectfully submitted,

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